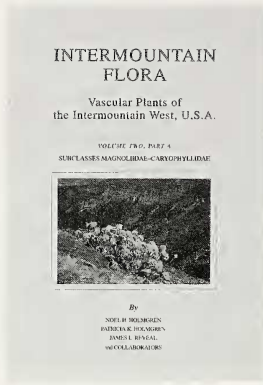


REVIEW



*Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A.* Subclass Magnoliidae–Caryophyllidae, Vol. 2A. By N. H. HOLMGREN, P. K. HOLMGREN, J. L. REVEAL, AND COLLABORATORS. 2012. The New York Botanical Garden Press, Bronx, New York. 742 pp. ISBN 978-0-89327-520-4, Price \$150.00, hardcover.

This work constitutes the finale of the *Intermountain Flora* series, begun in 1972 and encompassing six volumes total, with volumes 2 and 3 each published in two parts. The series covers the plants of an extensive region between the Sierra Nevada and Rocky Mountains, encompassing the entire Great Basin plus the Wasatch Mountains, Uinta Mountains, and Colorado Plateau. This range includes central and northern Nevada, extreme eastern/northeastern California, southeastern Oregon, southern Idaho, extreme southwestern Wyoming, all of Utah, and extreme northwestern Arizona.

From its inception the *Intermountain Flora* series has used Cronquist's (e.g., 1981) classification, with this last treatment (Volume 2, Part A) covering his subclasses Magnoliidae, Hamamelidae, and Caryophyllidae. However, because Cronquist's system has been largely superseded by others derived from molecular phylogenetic analyses (notably the Angiosperm Phylogeny Classification [APG], with the most recent version being APG III 2009), some discrepancies with these recent systems are apparent. In the *Intermountain Flora*, the Magnoliids include not only the Magnoliaceae and Saururaceae, but also both the Nymphaeales/Nymphaeaceae (now accepted as one of the first lineages of angiosperms and basal to the Magnoliids), and the Ranunculales (now accepted as basal Eudicots). In subclass Hamamelidae of the *Intermountain Flora*, the three orders treated—Fagales, Hamamelidales, and Urticales—have family compositions mostly corresponding to APG III, but their higher-level classification is quite different in the latter, indicative of the fact that wind pollination evolved independently among many of these taxa. The third subclass treated in the *Intermountain Flora*, the Caryophyllidae (Order Caryophyllales), agrees essentially entirely with that of APG III. Despite some differences in classification of families within

subclasses and some orders, the actual delimitation of families follows that of APG III or other recent studies. For example, the Montiaceae and Sarcobataceae are treated as families separate from other caryophyllids.

Aside from these obvious differences in higher-level groupings, this last treatment of the *Intermountain Flora* adheres to very high standards. A practical key of the families, without reference to suprafamilial groups, precedes taxonomic treatments. Subclasses, orders, and families are each described, with summarizing features, differences in classification from other systems, and up-to-date references cited. Keys to genera and species are very well constructed. Listed in the treatments are number of total species within families and genera, etymology of scientific names, chromosome numbers, habitat information, elevation, geographic range, notes on cultivation, close relatives, and notes on classification, including recent phylogenetic studies.

What I particularly like about the *Intermountain Flora* series is the complete listing of synonyms, both heterotypic and homotypic, for each taxon, these including author(s), publication, type-collection data (collector, number, date of collection, and habitat), and citation of holotype, isotype, and/or lectotype specimen(s). Common names are given for every taxon, granted that this is a source of contention among professional taxonomists. Species descriptions are particularly complete, with descriptive terminology precise and specialized (not “watered down”), the latter a joy for professional botanists. Line drawings are of extremely high quality and illustrate the whole plant plus close-ups of flowers and/or fruits, with emphasis on diagnostic features. Illustrations are presented for every taxon in the book, eliminating a common source of frustration experienced with other floras. Finally, the text formatting is concise and efficient, with artistic and pleasing use of font type, font size, and paragraph and line spacing.

In summary, this last contribution of the *Intermountain Flora* follows the same scholarly standards of earlier volumes and incorporates up-to-date information from current research papers. However, this book is more for the professional botanist, as opposed to the layperson. Although the higher-level grouping of families is sometimes antiquated and the geographic scope of the *Intermountain Flora* volumes is somewhat limited, the quality of taxonomic treatments makes this book exceptionally worthy as a reference. Botanists will find the series useful not just for keys and taxonomic treatments of

plants occurring in this geographic region, but also for the detailed information presented for specific taxonomic groups. These are essential references to be consulted on the plants of western North America.

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